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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/655,598

09/05/2003

Jorg Hager

48506-00009

5726

23767

7590

04/27/2006

PRESTON GATES ELLIS & ROUVELAS MEEDS LLP  
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WASHINGTON, DC 20006

EXAMINER

BABIC, CHRISTOPHER M

ART UNIT

PAPER NUMBER

1637

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/655,598	<b>Applicant(s)</b> HAGER ET AL.	
	<b>Examiner</b> Christopher M. Babic	<b>Art Unit</b> 1637	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The rejections of Claims 1-19 under second paragraph are moot in view of Applicant's amendment.

### ***Claim Rejections - 35 USC § 102***

The rejections of Claims 1-19 over Lin are moot in view of Applicant's amendment.

### ***Claim Rejections - 35 USC § 103***

The rejections of Claims 1-19 over Lin in view of Weissman are moot in view of Applicant's amendment.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory

Art Unit: 1637

double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

It is noted that only representative claims will be discussed.

**1. Claims 20-31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claim 10 of Hager (U.S. 6,887,666 B1).**

Claim 10 of Hager ('661) recites a method comprising: (a) digesting separately nucleic acids from a mixture of at least two nucleic acid populations with at least one restriction enzyme; (b) ligating a blunt ended adaptor sequence to the restriction fragments resulting from the digestion in step (a); (c) amplifying adaptor-ligated restriction fragments generated in step (b) using an adaptor-specific primer to produce amplification products having different ends in respect to each population; (d) hybridizing the amplification products of step (c) from the different nucleic acid populations with each other to generate a mixture comprising homoduplexes and heteroduplexes; (e) eliminating blunt ended homoduplexes from heteroduplexes having forked ends by digesting the homoduplexes with an enzyme that specifically digests blunt ended double-stranded DNA fragments; (f) eliminating mismatched heteroduplexes by using mismatch repair enzymes; and (g) identifying, isolating or

Art Unit: 1637

separating fully-matched heteroduplexes, thereby identifying, isolating or separating nucleic acid fragments that are identical between said at least two nucleic acid populations; wherein said primer is labelled by a technique selected from the group consisting of adding a unique 5'-sequence to the primer.

Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both drawn to the same general inventive concept of identification, isolation or separation of identical nucleic acid fragments from a mixture of at least two nucleic acid population. Claim 10 of Hager ('661) differs in scope only in that the 5' unique sequence is introduced through an amplification primer ('661) rather than directly through the original adaptor sequence as in Claim 1 of the instant application.

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time of invention to directly introduce a 5' unique sequence through the original adaptor sequence in order to circumvent the amplification step recited in Claim 10 of Hager ('661).

### ***Allowable Subject Matter***

Claims 20-31 are allowable over the prior art, but are rejected for other reasons discussed above. A search of the prior art revealed no reference teaching or fairly suggesting the methods of Claim 20. The closest prior art, Lin et al. (U.S. 5,871,927), teaches the isolation of desired *different* sequences from two DNA libraries further

Art Unit: 1637

comprising the digestion of single-stranded mismatched ends of tester-subtracter heterohybrids while *maintaining* blunt-ended tester-homohybrids.

### ***Conclusion***

**Claims 20-31 are rejected. No claims are allowed.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Babic whose telephone number is 571-272-8507. The examiner can normally be reached on Monday-Friday 7:00AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/655,598

Page 6

Art Unit: 1637

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PRIMARY EXAMINER

4/24/06